

GSA/ZEISS Research Grant: Policies and Procedures

Introduction

The mission of the [Geological Society of America](#) (GSA) is to advance geoscience research and discovery, service to society, stewardship of Earth, and the geosciences profession. The [ZEISS Group](#) (ZEISS) is a leading international technology company in the fields of optics and optoelectronics, promoting scientific and technological progress and aspiring to foster future generations of scientists. Together, GSA and ZEISS are offering GSA members a new research grant of up to \$10,000 to be used for innovative microscopy in geoscience projects. ZEISS will also provide access to technology and expertise with the instrumentation.

Eligibility

- Candidates must be a current GSA [Student Member](#) or GSA [Early Career Professional Member](#).
- Candidates must be a Masters student, Ph.D. student, post-doctoral researcher, or early career researcher (most recent degree completed within the last five years).
- Candidates must be enrolled at or employed by institutions in North America or Central America.
- GSA invites the full participation of individuals currently being underserved in geoscience career fields. This includes, but is not limited to, individuals from racially and/or ethnically diverse communities, individuals with disabilities, individuals from LGBTIQ+ communities, and individuals who experience intersectionality with one or more of these identities.
- Grants are awarded only to individuals; institutions, societies, and universities are not eligible for grants.
- Individuals may only receive a total of one GSA/ZEISS Research Grant, but having received [other GSA-affiliated grants](#) does not disqualify an individual.

Timeline

Timing	Action
1 April 2021	GSA will begin to accept proposals.
26 May 2021, 5:00 p.m. (Mountain)	Deadline to submit proposals to GSA.
June and July 2021	A panel of senior ZEISS staff and GSA members will review proposals.
July/August 2021	Two to three top candidates will participate in face-to-face interviews at GSA Section Meetings , or via videoconference.
August 2021	GSA will notify candidates of results via e-mail.
August 2021	GSA will mail the recipient a check with the first half of the grant money.
September/October 2021	Within four weeks of receiving the first half of the money, the recipient must initiate the research (or return the money).
September – December 2021	Recipient may visit ZEISS labs, using grant money as allocated in their proposal.
1 December 2021	Recipient submits an interim report to ZEISS and GSA.
10-13 October 2021	Recipient recognized at Penrose Circle and Student Awards Reception at the 2021 GSA Annual Meeting in Portland, Oregon, USA
1 February 2022	GSA will mail the recipient a check with the second/final half of the grant money.
January/February 2022	GSA will mail the recipient a 1099 form , according to IRS guidelines.
26 May 2022	Recipient submits a three to four page white paper to ZEISS and GSA to report on the completed research project.
Later in 2022	Recipient encouraged to communicate their results widely through GSA publications , social media , meetings , etc.

Ethics & Professional Conduct

As GSA Members, the students and early-career professionals covered by this policy must adhere to [GSA's Code of Ethics and Professional Conduct](#), and its associated policies, in writing their research proposals and in carrying out the research. Particular attention should be paid to **Section 3.2, Mandatory Standards**, which states "We do not engage in **research misconduct**, including **fabrication, falsification, or plagiarism.**" GSA defines research misconduct in accordance with the U.S. federal regulations ([45 CFR 93.103](#)), which includes:

- **Fabrication** - "making up data or results and recording or reporting them."
- **Falsification** - "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record."
- **Plagiarism** - "appropriating another person's ideas, processes, results, or words without giving appropriate credit." GSA interprets this definition broadly to forbid plagiarism in verbal or written communications.

GSA encourages applicants to use their research grant proposal as an opportunity to practice ethical scientific research and communication. Special care must be taken to avoid plagiarism. The text of the proposal must represent the original work of the applicant, rather than the work of an advisor or peer. GSA reserves the right to submit research proposals through plagiarism-detection software. If a member of GSA staff or the GSA Research Grants Committee observes, through software or other means, that a proposal contains evidence of potential plagiarism, the matter will be reported to the GSA Ethics and Compliance Officer, the GSA Director of Education, Communications, and Outreach, and the GSA Research Grants Committee Chair. In such a case, GSA will take appropriate steps to investigate the situation in accordance with the Society's Policy & Procedures for Handling Potential Ethical Violations. If GSA determines that plagiarism has occurred, the GSA Council may order one or more of the following disciplinary actions:

- Not providing a grant
- Informing the applicant's advisor that plagiarism has been committed
- Not allowing the individual to apply for another GSA grant or program
- Termination of GSA Membership
- Other consequences, as determined by the GSA Council.

Many universities offer resources that describe the various types of plagiarism and how to avoid them. Here are some examples:

- Purdue Online Writing Lab (OWL): [Avoiding Plagiarism](#)
- The Writing Center at the University of Wisconsin - Madison: [Quoting and Paraphrasing](#)
- Duke University: [Plagiarism Tutorial](#)
- Harvard University: [Harvard Guide to Using Sources](#) (includes a section about Plagiarism)
- Chronicle of Higher Education: [Plagiarism in Grant Proposals](#), by Karen M. Markin, 12/10/12

Finances: Terms for Release of Funds

The \$10,000 GSA/ZEISS Research Grant will generally be awarded to one overall winner, but the grant may be split between two winners.

As soon as the winning recipient accepts the grant, GSA will mail them a check with the first half of the grant money. At roughly the midway point of the project, the recipient must submit the initial budget with the expenses to that date logged against the original plan. So long as there are no significant changes, GSA will then mail a check with the second/final half of the grant money.

The recipient is expected to commence the research project promptly and as described in their proposal, and they are expected to continue it diligently throughout the expected duration of the investigation. If the recipient is unable to initiate the project within 4 weeks of receiving the money, or, once started, if the recipient is unable to complete the project within the allotted timeframe, the recipient must return any unused portion of the grant

to GSA immediately. If the recipient receives substantial funding from another source for specific items budgeted in their GSA/ZEISS grant proposal, GSA should be notified immediately. Funds returned to GSA will be re-awarded promptly to alternate candidates who have been selected by the GSA/ZEISS panel.

If it is thought that the grant money has been used fraudulently, the recipient will be barred from applying for other competitions/grants in the future with ZEISS or GSA.

Taxation

GSA is required to issue [1099 forms](#) at the end of each calendar year according to rules set by the IRS. Issuance of a 1099 does not necessarily mean the income is taxable to the recipient—he or she must make that determination, which may require the services of a professional tax accountant. GSA cannot offer tax advice.

Usage of ZEISS Facilities

The grant recipient(s) will have the option to spend a period of time (generally between June and October) at ZEISS offices in the United States to facilitate training and the successful completion of their project. Facilities will be made available for them to work during their time. The recipient(s) may also be provided with access to facilities in the United Kingdom or Germany depending on the analytical requirements of their research (at the discretion of ZEISS).

At ZEISS facilities, the recipient(s) would have potential access to the following technologies: light microscopy, Scanning Electron Microscopy (SEM), X-Ray Microscopy (XRM), Focused Ion Beam (FIB), He-ion microscopy, and potentially Nanoscale Secondary Ion Mass Spectrometry (nanoSIMS). (See more details in the next section; this is not an exhaustive list.)

Transportation costs to ZEISS facilities will be covered by the recipient(s) out of their grant money; there is no further allowance for this above the grant total. The grant money may be used to cover transportation and upkeep, but not accommodation.

The recipient(s) will keep confidential any information supplied or gained by them, such as sensitive research or innovation, during time spent at ZEISS sites or through talking to ZEISS staff. They will also agree not to promote any competitor organization to ZEISS during the grant period and in the following twelve months after completion of the project.

ZEISS Facilities and Equipment*

ZEISS Innovation Center – Dublin, California

- X-ray microscopes:
 - Versa
 - Ultra
- Light microscopes:
 - Axio Scan
 - Axio Imager
- Electron microscopes:
 - GeminiSEM
 - Sigma
 - Evo

ZEISS Demo Center – Cambourne, United Kingdom

- Electron microscopes & software:
 - Sigma
 - Mineralogic

**This is not an exhaustive list.*

Proposal Format

Proposals must be submitted by 26 May 2021, 5:00 p.m. (Mountain).

Proposals (and all associated reports) must be written in English

Proposals must include:

- Candidate name and contact information
- Demographic information (optional)
- Title of proposed microscopy project (200 character limit, including spaces)
- Project timeline/duration (600 character limit, including spaces)
 - Projects should generally range from four to six months in length.
 - If selected for a grant, the timeframe will be agreed between all parties in advance of the project's start.
- Name and e-mail address of the primary research supervisor
 - The supervisor will only be contacted if the candidate is selected as one of the fifteen semi-finalists.
- Budget showing approximately how the grant money will be used
 - Allowances for institutional overhead costs will not be funded.
 - Costs for past work will not be funded/reimbursed.
 - Transportation costs to travel to ZEISS facilities are allowed and encouraged. (Overnight accommodations excluded.)
 - For a general overview of the types of costs that can and cannot be included in the budget, please see GSA's [Research Grant Policies and Procedures](#) document. (Refer to the "Guidelines for the Use of Funds" section near the end, and keep in mind that the GSA/ZEISS Research Grant has some differences, such as the grant amount.)
 - Budget will be formatted as a table with columns for "Name of budget item," "Rationale for budget item," "Item cost," and "Explanation of item cost."
- Summary of proposed project (6,000 character limit, including spaces)
 - Describe how your research will apply microscopy to the geosciences in an original or innovative way.
 - Present the problem, hypotheses, and the overall objectives of the project.
 - Discuss the scientific and societal significance; what is the importance of this project?
 - Describe the research plan and how it will test the stated hypothesis.
 - Demonstrate the candidate's level of experience or understanding of the use of microscopy in the geosciences. The successful candidate does not have to have received previous training in the specific microscopy technique proposed for the project, but a basic level of microscopy understanding will be expected.
 - If a candidate has already used one technique for their research and would like to use a second, that is a suitable situation.
- Abbreviated resume (2,500 character limit, including spaces)
 - List education, major positions held, and significant accomplishments.
 - Include information relevant to your qualifications to undertake proposed research.
 - List up to 5 of your publications and presentations.
- References Cited (2,500 character limit, including spaces)

Review Process

Proposals will be reviewed on a competitive basis by a panel of senior ZEISS staff and GSA members. The panel will evaluate the scientific merit (the innovative use of microscopy, in particular), the capability of the investigator, and reasonableness of the budget.

The first review stage will reduce the candidates to no more than fifteen semi-finalists. The panel will then determine the two to three finalists who will be granted interviews.

Interviews will generally take place via videoconference, but may also occur in-person at GSA events, such as Section Meetings and Annual Meetings. If interviews are to be conducted in-person, ZEISS will pay for transportation expenses (within the United States only; overnight accommodations not included).

Final Report

A three to four page white paper submitted to both ZEISS and GSA at the end of the project term is a requirement of accepting the grant.

The first page should summarize what was done in terms of testing and research, with the greatest emphasis on the microscopy undertaken. There should also be a budget summary to account for how the grant money was used.

The remainder of the white paper should give a short introduction and then describe what was discovered. This should be written in an accessible style so that it can be used widely by both ZEISS and GSA.

Communication of Results

In addition to the official reporting to ZEISS and GSA, recipients are strongly encouraged to communicate the results of their research to a wide audience. Potential avenues of communication include:

- [GSA Publications](#)
- [GSA Annual Meeting](#)
- [GSA Section Meetings](#)
- [Speaking of Geoscience](#)
- GSA's social media accounts ([Facebook](#), [Twitter](#), [Instagram](#))

When communicating results, ZEISS and GSA should be acknowledged for their support.

If ZEISS staff contribute significantly to published results, the recipient(s) should communicate with them about being listed as a co-author.

GSA encourages the reporting of publication acceptances back to the GSA Education Programs Manager (researchgrants@geosociety.org).

Recognition

Recipient(s) will be recognized in various ZEISS and GSA communications, including [GSA Today](#), the [GSA website](#), [GSA social media accounts](#), [ZEISS social media accounts](#), and more. The recipient(s) will also be invited to participate in the GSA Foundation Penrose Circle and Student Awards Reception at the GSA Annual Meeting. At this event, recipients of specialized research grants supported by the GSA Foundation and GSA sponsors are presented with a certificate and recognized in front of an audience of peers, Foundation donors, and GSA sponsors. The recipient(s) are strongly encouraged to attend this event.

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